



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,128	01/16/2004	Yong-duk Lee	1793.1162	5036

21171 7590 04/17/2006

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

GARCIA JR, RENE

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/758,128	LEE, YONG-DUK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rene Garcia, Jr.	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 34 and 43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-32 and 39-42 is/are allowed.
- 6) ☒ Claim(s) 33, 36 and 38 is/are rejected.
- 7) ☒ Claim(s) 35 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claim 33 is withdrawn in view of the newly discovered reference(s) to Gast et al. (US 6,076,915), further interpretation of previously presented claim 34 (now recited in claim 33) as broad is reason for new grounds of rejection of current claim 33 subject matter. Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gast et al. (US 6,076,915) in view of Yoshida et al. (US 6,390,698).

#### **Gast et al. disclose the following claimed limitations:**

\*regarding claim 33, method of correcting a printing error in an inkjet printer/10/ (ABS) having a printer head/60/, on which nozzles/64/ are provided, and a feed roller/30/, the method comprising: (fig. 1)

\*moving the print paper/media sheet, 12/ a first distance, and printing a reference line/first portion test pattern, 105/ at a predetermined interval (figs. 1 and 10)

\*moving the print paper/12/ on which the reference line/first portion test pattern, 105/ is printed a second distance, and printing comparison lines/second portion test pattern, 104/ at a predetermined interval (fig. 10; col. 9, lines 34-48)

Art Unit: 2853

\*detecting an error distance between the reference line/105/ and one of the comparison lines/104/ (col. 10, lines 29-49)

\*correcting a distance that the print paper/12/ is moved according to the detected error distance (col. 10, lines 44-49)

\*first distance is a percentage of the width of the printer head (paper moves a distance; any movement of the paper at any distance is a percentage of the printer head width, either less than equal to or greater than equal to one-hundred percent)

**Gast et al. does not disclose the following claimed limitations:**

\*regarding claim 33, determining if a trailing end of a print paper has escaped from the feed roller which periodically moves the print paper

\*if the trailing end of the print paper is determined to have escaped from the feed roller

\*regarding claim 38, exhaust roller moves the print paper the second distance

**Yoshida et al. disclose the following:**

\*regarding claim 33, determining if a trailing end of a print paper/50/ has escaped from the feed roller/64/ which periodically moves the print paper/50/ (fig. 7 & 10) for the purpose of discharging the printed paper

\*if the trailing end of the print paper/50/ is determined to have escaped from the feed roller/64/ (fig. 7 & 10) for the purpose of discharging the printed paper

\*regarding claim 38, exhaust roller/paper discharging roller, 68/ moves the print paper/50/ the second distance (col. 5, lines 11-20) for the purpose of feeding the paper

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize a print paper escape detector which detects whether a trailing end of a print paper has escaped from the feed roller which periodically moves the print paper, and outputs the result of the detection as a first control signal; feed roller driving controller which outputs a second control signal to move the print paper in response to the first control signal; and exhaust roller to move the print paper if a trailing end of a print paper has escaped from the feed roller as taught by Yoshida et al. into Gast et al. for the purposes of: discharging the printed paper; and feeding the paper.

4. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gast et al. (US 6,076,915) as modified by Yoshida et al. (US 6,390,698) as applied to claim 33 above, and further in view of Bloomberg (US 2002/0070998).

**Gast et al. as modified by Yoshida et al. disclose the claimed limitations except for the following:**

\*regarding claim 36, second distance is equal to the first distance

**Bloomberg disclose the following:**

\*regarding claim 36, second distance/offset/ is equal to the first distance/offset/ (paragraph 0025) for the purpose of reducing the effect of any misalignment in the locations of the various inkjets of the print head.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize the first distance is half the width of the printer head; and second distance is equal to the first distance as taught by Bloomberg into Gast et al. as modified

by Yoshida et al. for the purpose of for the purpose of reducing the effect of any misalignment in the location s of the various inkjets of the print head.

*Allowable Subject Matter*

5. Claims 39-42 are allowed.

The following is a statement of reasons for allowance:

The primary reason for the allowance of claims 39-42 is the inclusion of the limitations of an inkjet printer including a distance calculation corrector which adds or deducts the nozzle distance between neighboring nozzles divided by a positive integer  $p$  to or from the calculated nozzle distance, and outputs the added or deducted nozzle distance as a tenth control signal indicating the error distance. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

6. Claims 35 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter of claim 35 is the inclusion of the method step of an inkjet printer that includes first distance is half the width of the printer head. It is this step found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Art Unit: 2853

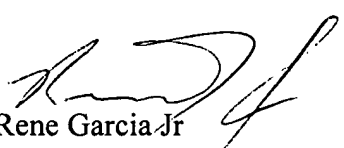
The primary reason for indicating allowable subject matter of claim 37 is the inclusion of the method step of an inkjet printer that includes second distance is equal to the first distance  $\pm$  the distance between neighboring nozzles divided by an integer p. It is this step found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.


***Communications with the USPTO***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Garcia, Jr. whose telephone number is (571) 272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Rene Garcia Jr  
13 April 2006

  
K. FEGGINS  
PRIMARY EXAMINER